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ABSTRACT

This paper posits that it is necessary to evoke the development of an adequate federal KPU (Knowledge Production and Utilization) program in education which will command broad-based support within and outside the profession and that this demands a reformulation of the conceptual structure on which the program is built. Section 1 offers a historical analysis of federal involvement in educational KPU and offers some generalizations regarding the goals and the means for achieving them that have characterized federal programs and policies. The conceptual structures that have emerged during this period are identified and criteria that can be employed in assessing such structures are proposed. The second section examines the systems view, which is the conceptual structure currently dominating educational KPU policy. How this view emerged and how it is reflected in current KPU policy are discussed. Also this concept is assessed in terms of the criteria listed, and its shortcomings in relation to realism and balance are noted. Section 3 purposes an alternative structure, the configurational view. This view is contrasted with the systems view on the dimensions of completeness, realism, and balance. It is concluded that the configurational model would result in more productive relationships between federal funding agencies and KPU units in the field and among the latter. Section 4 provides illustrations showing the effect the configurational view might have on educational KPU policies and program. (PD)

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THE CONFIGURATIONAL PERSPECTIVE:

A CHALLENGE

to the

SYSTEMS VIEW

of

EDUCATIONAL KNOWLEDGE PRODUCTION AND UTILIZATION

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CONTENTS

		Page
	Introduction and Overview	1
I.	Federal Level Policies and Programs for Educational KPU: A Depiction	4
	1867-1954: Social Bookkeeping in Education	5
	1954: Breakthrough	7
	1954-1972: A Period of Growth	8
	1972: Enter N.I.E.	13
	A Capsular Review	14
	A Comment on Conceptual Structures	16
II.	The Systems View of Educational KPU: A Critique	18
	Identifying a Necessary and Sufficient Set of KPU Functions	18
	Creating a System: Linearity and Function Linkage	20
	Assessing the Systems View	21
	Completeness	21
	Balance	22
	Realism	25
	Commentary	27
III.	The Configurational View of Educational KPU: A Proposition	29
	The Configurational View: Definition	29
	The Configurational View: Depiction	32
	Testing the Configurational View	42
	Completeness	42
	Balance	43
	Realism	44
	Contrasting the Configurational and Systems Views	46
IV	The Configurational View of Educational KPU: Some Illustrations	54

INTRODUCTION AND OVERVIEW

Federal appropriations in support of educational knowledge production and utilization (KPU)[1] began a leveling trend as early as 1970. In FY 74, support for the National Institute of Education was slashed in half by the Congress only two years after that key agency was initially authorized. This year NIE is limping along under a continuing resolution while its fate hangs in the balance of Congressional deliberation. The educationist community is itself apparently sufficiently dubious about the efficacy of the Federal presence in educational KPU to be either unable or unwilling to mount a strong program of support for NIE at this critical time. R & D Centers, regional educational laboratories, private educational research agencies, and institutions of higher education with major investments in KPU are instead agonizing not only over their ability to continue to produce effectively but in fact to survive as educational KPU agencies.

In the midst of this negative turmoil, the origins of which are complex and multi-faceted (involving political maneuvering, lack of leadership, and historical lack of confidence in educational research), the thrust of this paper will be to direct attention to an alternative thesis about why educational KPU is in this disastrous posture at this time. It will be the contention of this paper that if all of the field's current ills on the political

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[1] Throughout this paper the phrase "knowledge production and utilization" (KPU) will be used instead of the more standard designation, "educational R & D." This substitution is being made because our concern (and, as a matter of fact, the concern of current Federal policy) is more comprehensive than the production of research knowledge and development products; it includes the utilization of this knowledge and these products to improve schools.

scene would disappear tomorrow, they would reappear shortly, for:

> The current Federal policies and programs in support of educational KPU are inadequate to effect significant improvement oriented change in educational practice.

And these inadequacies cannot be explained away on the basis of conditions (political or structural) that have arisen in the past year or two. In fact:

> The inadequacies are embedded in the conceptual view that has been adopted to undergird these policies and programs.

Despite the emergencies with which the field is now confronted, and the urgency that they are bound to evoke:

> The development of an adequate Federal KPU program in education which will command broad-based support within and outside the profession demands a reformulation of the conceptual structure on which the program is built.

To support this argument, the paper will first offer a brief historical analysis of Federal level involvement in educational knowledge production and utilization. From this analysis, which will concentrate on the modern era of Federal concern for KPU (1954-74), generalizations will be offered regarding both the goals and the means for achieving them that have characterized Federal policies and programs. The conceptual structures (or views of the educational KPU world) that have emerged during this period will be identified, and criteria which can be employed in assessing such structures will be proposed, i.e., completeness - sufficiency to account for the full spectrum of KPU functions; balance - responsiveness to both individual (idiographic) and institutional (nomothetic) goals of agents and agencies involved in educational KPU; and realism - the accuracy with which the structure reflects the "real world" of educational KPU.

The second section of the paper will turn to a more detailed examination of the systems view which is the conceptual structure currently dominating educational KPU policy. How the view emerged from the Federal experience of the past twenty years and how it has become reflected in present Federal KPU programs will be discussed. This concept will be assessed in terms of the criteria just listed and its shortcomings in relation to realism and balance will be noted.

An alternative conceptual structure, the configurational view, will then be proposed. The new perspective will be contrasted with the systems view on the dimensions of completeness, realism, and balance. The conclusion will be drawn that the use of the configurational model to generate Federal policies and programs for educational KPU would result in more productive relationships both between Federal funding agencies and KPU units in the field and among the latter units.

Finally, some illustrations of how adoption of the configurational view might affect Federal level policy and programs will be offered.

The four major sections of the paper, then, will present:

I - A depiction of the conceptual structures that have controlled Federal KPU policy in education.

II - A critique of the dominant structure that has emerged, i.e, the systems view.

III - The proposition of an alternative structure, the configurational view.

IV - An illustration of the effect the configurational view might have on educational KPU policies and programs.

FEDERAL LEVEL POLICIES AND PROGRAMS FOR EDUCATIONAL KPU: A DEPICTION

The first Federal level policy statement relating to educational KPU was issued in 1867 at the time of the establishment of a national Department of Education and charged the new Department with responsibility for:

> "...collecting such statistics and facts as shall show the condition and progress of education in the several states and territories, and of diffusing such information respecting the organization and management of schools and school systems, the methods of teaching, as shall aid the people of the United States in the establishment and maintenance of efficient school systems..."[2]

This statement stood unchallenged as the Federal policy in educational KPU until 1954 when two significant additions were made. One was the passage of P. L. 531 (the Cooperative Research Act), which authorized the Commissioner of the United States Office of Education to enter into "contracts or jointly financed cooperative arrangements with universities and colleges and state educational agencies for the conduct of research, surveys, and demonstrations in the field of education."[3] Simultaneously, the National Science Foundation initiated planning for course content improvement activities built upon its enabling legislation (of 1950) which had charged the Foundation with improving education in the sciences.

It is not the purpose of this paper to provide a detailed history of

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[2]United States, An Act to Establish a Department of Education, 39th Congress, 2nd Session, March 2, 1867.

[3]United States, An Act to Authorize Cooperative Research in Education, Public Law 531, Chapter 576, 83rd Congress, July 26, 1954.

Federal legislation in educational RPU, but some context setting is necessary to make sense out of the present Federal scene. Brief consideration is therefore given to the period 1867 to 1954 before moving to a more comprehensive analysis of recently initiated programs.

1867 - 1954: Social Bookkeeping in Education

A careful reading of that section of the Act of 1867 which pertained to research in education might lead the reader to the conclusion that the Department had relatively broad legislative authority available under which it could have operated in educational RPU. A contemporary analyst would probably argue that evaluative studies and decision-oriented research are implied if not stated in the phrases, "condition and progress of education," and "establishment and maintenance of efficient school systems." Diffusion is referred to specifically and development activity would seem to be implied by both the phrases, "organization and management of schools," and "methods of teaching." There is no special indication as to the method to be employed by the Department in "collecting such statistics and facts" or "diffusing" them so one could imagine that this could have been contracted as well as handled internally. In fact, it could be argued plausibly that P. L. 531 was accommodated easily under the Department's (then Office's) existing authorization and was merely a special case rather than a new departure.[4]

However one might wish to re-examine the Department's authorization re-

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[4]This point tends to be substantiated by the preface to P. L. 531 which noted that the Cooperative Research Act was designed, "... to enable the Office of Education more effectively to accomplish the purposes and to perform the duties for which it was originally established.." CRP can reasonably be viewed as an implementing authorization rather than a new policy statement.

trospectively, in practice the commissioners of education interpreted it narrowly. Two types of inquiry activities were generated in response to this authorization. First, the Department initiated the collection of regularized data about the American public school system - and this function has persisted and grown within the structure of the Office of Education until August, 1974 when the then-designated National Center for Educational Statistics was transferred from U.S.O.E. to the Office of the Assistant Secretary for Education. Second, the commissioners implemented their broader charge by organizing the Office of Education around substantive specialists in every school subject from mathematics to civil defense, and by charging these specialists with responsibility for conducting ad hoc, normative surveys which complemented the census type activity. The specialists communicated with schools and school personnel through professional association contacts and the issuance of periodic special subject bulletins.

This pattern of activity by the Office avoided the necessity of explicating any underlying conceptual structure in relation to educational KPU since it paralleled (rather than interacted with) both the communities of educational research and practice. The Federal presence was passive and not influential. Information was disseminated in much the same mode as employed by the Census Bureau. Information is available to anyone interested enough to seek it out, but the Bureau does not intrude upon those who are not interested. The educational research community provided no impetus during this period for any other posture; it was itself vacillating through successive emphases on philosophic inquiry, empiricism, and the exhortation of innovation. Meanwhile the Office continued to fulfill its mission undisturbed by such transitory, external events. If there is a single way to typify this eighty-seven

year span of KPU-related activity, the term "social bookkeeping" serves about as well as any.

1954: Breakthrough[5]

In 1954 the "tight little island" finally lost its isolation from the broader educational KPU community. The moves by both U.S.O.E. and N.S.F. (which were actually implemented in both agencies in 1956) had several implications for the Federal posture in educational KPU:

-- Most obviously and significantly U.S.O.E. was forced into direct contact with the scholarly community in higher education concerned with research in education.

-- Less obviously, but no less significantly, both O.E. and N.S.F. became enmeshed with the community of educational practice. The Office was not only authorized to contract with S.E.A.'s but to conduct demonstrations which appear to have been intended to influence educational practice. The end result of the N.S.F. program was surely to effect change in school curricula.

-- For the first time the Federal government was forced into some critical choice points in the establishment of educational KPU policy. Several very significant questions emerged:

How should the Federal government interface with the KPU community in education?

What should be the goals for educational KPU at the Federal level?

How extensive should the programs to support these goals become?

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[5]In practical political or economic terms, the phrase "breakthrough" is melodramatic. The new programs in educational KPU did not take Washington by storm. Congress waited two years to provide any appropriations to support P. L. 531 and then appropriated only 1.0 million dollars - two thirds of which was earmarked to support research on mentally retarded children.

What perspective on educational KPU should the Federal government assume in building an optimal operating program to support knowledge production and utilization in education?

1954 - 1972: A Period of Growth

Only one of these questions seemed to have an answer that flowed readily and unchallenged: viz., the question of overall goals for KPU. The persistent response was: IMPROVEMENT ORIENTED CHANGE IN EDUCATIONAL OPERATIONS.[6] As soon as CRP was organized, Congress directed its question asking in appropriations hearings to the effect of the program on schools. The first significant Government review of CRP, while noting that the program had "stimulated qualitative improvement and quantitative expansion in educational research," also noted that "...the results of the projects... did not lead directly enough or quickly enough to observable change and desired improvement in educational practice..."[7] This overarching goal was, of course, consistent with the Office's original charge to aid "in the establishment and maintenance of efficient school systems." And the goal has persisted to date. The Educational Amendments Act of 1972 establishing a National Institute of Education specified that it will be the policy of the United States to "help to solve or to alleviate the problems of, and promote the reform and renewal of, American

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[6] A recent provocative paper on social science policy argues that such would of necessity be the case by definition since "social science is a form of social action" (p. 10). This concept is extended to argue that "the object of social science becomes not the generally true but the specifically applicable" (p. 13); that its character is essentially political; and that "social science research needs to recognize and operationalize the needs and concerns of the multiplicity of stakeholders in society" (p. 17). For an amplification of this view see Hendrik D. Gideonse, "Social Science Policy and the Federal Government," in Memorandum to Committee on Science and Astronautics (Washington, D. C., August 14, 1974).

[7] Building Capacity for Renewal and Reform (Washington, D.C.: National Institute of Education, December 1973), pp. 9-10.

education..."[8]

Answers to the implementing questions have neither been consistent nor persistent. The early interventions as represented by C.R.P. and Title VII of the National Defense Education Act assumed what can probably best by typified as a social science perspective of educational KPU. Both programs copied (in some instances even to the level of application forms and criteria) the structure and procedures that had been employed so successfully by The National Science Foundation, National Institutes of Health, and Office of Naval Research. The primary institutional locus for program support was the institution of higher education; the structure was the open competitive application for funds by individual scholars; the product was the R and D report from the scholar to the agency. Under these circumstances the primary reference group being serviced was the scholarly community in institutions of higher education.

But not everyone, including the Government itself, was satisfied with this narrow posture. The overall dissatisfaction was usually expressed in such global terms as "failure to get at the real problems in schools," or "not affecting educational practice," or "results which don't add up to anything." O.E.'s initial reaction, prior to significant new legislation in 1965, was designed to alleviate some of these symptoms. The initiation of development-oriented programs such as Project English and Project Social Studies was in emulation of N.S.F.'s apparent success in modifying school curricula through its course content improvement program. Work was begun on a storage and retrieval system for educational information and data to bring the results of

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[8] Ibid., p.1.

R and D reports together in accessible form for scholars and, wishfully, for practitioners. The establishment of R and D centers was an effort to make the results add up to something by supporting a critical mass of researchers in one institutional setting who could work together on a problem area of major significance over time. Note, however, that these ventures retained essentially the same perspective of educational KPU. The institutional loci of the new programs were not diversified. Attention was being paid to the incompleteness of the perspective, i.e., by encouraging development as well as research ventures, but operationally the perspective of educational KPU was still drawn from the extant social science orientation. And the quantitative effect of the limited perspective was reflected in the relatively modest level of allocations to support the effort which had grown in toto for U.S.O.E. to only 14.0 million dollars in 1963.[9]

Those concerned with Federal educational KPU planning both inside and outside the Federal government were dissatisfied with O.E.'s program and were criticizing it on two counts. First, it was obviously incomplete, i.e., although it attended in at least a niggardly fashion to some necessary function areas (support for R and D by individual scholars), it ignored other areas completely (e.g., training, diffusion, adoption, inquiry in LEAs, etc.). Second, it was unsystematic, i.e., no explicit provision was made to link the processes of research, development, diffusion, and adoption together to bring the results of R and D to bear on effecting improvement-oriented change in schools. In 1965 with the passage of the Elementary and Secondary Education Act (ESEA) these concerns were reflected directly in the legislation of that

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[9] Ibid., p. 9.

Act pertaining to educational KPU.

ESEA tried on the one hand to flesh out the research, development, diffusion, and adoption (RDDA) function areas, e.g., the training provisions of Title IV; to broaden the participation in educational KPU of diverse agencies, e.g., LEAs under Title III; and to create linkage mechanisms which would bring educational R and D into the mainstream of American education, e.g., the national network of regional educational laboratories (REL's). For the first time, by the fall of 1966, an observer of the educational KPU scene in this country could identify a KPU system.

To be operable, a system requires role definitions for participants, (individuals and agencies) and linkage mechanisms across participants to facilitate the flow of materials to the point of impact (product delivery). Both efforts (role definition and linkage) were made under the ESEA programs. The roles of university-based R and D centers on the one hand and REL's on the other were defined in terms of an RDDA continuum. LEAs experimenting under Title III grants, were to provide feedback data to the scholarly R and D community while acting as demonstration centers in their own right. The Educational Research Information Center (ERIC) was to foster the free flow of information and data throughout the "system". The soon-to-be-initiated National Center for Educational Communications extended the concern for dissemination with such borrowed concepts as the county agent. The stage was set for a "systems" era in educational KPU in which agencies knew what to do, when, and how what they did related to overall system goals.

There is surely no doubt that quantitative growth in educational KPU was stimulated by E.S.E.A. In five years (by 1970) the U.S.O.E. budget for research was well in excess of 100 million dollars. Twenty RELs blanketing the country

had been mounted by the beginning of the 1966-67 school year. The R and D centers established originally by O.E. had been supplemented by specialized centers in vocational and special education. An Experimental Schools Program was added to demonstrate what could be done at the local level by saturating a school or school district with educational innovations. Substantive emphases were fed into the system as "national needs" in education emerged, e.g., career education.

In the midst of this scene of growth and progress, however, an individual actor had good reason to suspect that something was going awry, to wit:

-- If he happened to be located in a regional educational laboratory or R and D center, the chances are better than four out of ten that his organization was phased out altogether.

-- If he were an individual scholar in an institution of higher education he saw individual project support atrophy while total educational R and D funds increased geometrically.

-- If he ran a research training program, he saw support for the program withdrawn the same year the first graduates were produced.

-- If he were in any of these settings, he experienced a different set of signals from the National Center for Educational Research and Development (NCERD) of U.S.O.E. or its successor agency, N.I.E., every time a site visit was made or the Federal agency was reorganized (circa every six months).

This is obviously no way to run a railroad or a national educational KPU system. However, even astute observers of the national scene still concluded that prior to 1972 the chief problem was inadequacy in designing and managing the system, e.g.:

"Deficiencies in national planning, management, support, and evaluation

are a continuing impediment to realization of the full potential of educational R and D. These shortcomings spring largely from the failure to place educational R and D in charge of an adequately funded agency at a level in the government hierarchy comparable to the National Science Foundation or the National Institute of Health." [10]

1972: Enter N.I.E.

The Education Amendments Act of 1972 established a National Institute of Education and adopted the first explicit new policy statement governing educational KPU in over a century, declaring it to be the policy of the United States to:

"(i) Help to solve or to alleviate the problems of, and promote the reform and renewal of, American education;

(ii) Advance the practice of education, as an art, science, and profession;

(iii) Strengthen the scientific and technological foundations of education; and

(iv) Build an effective educational research and development system." [11]

The history of educational KPU for the last thirty months may have little to say about the necessity of a National Institute of Education but it speaks volumes about its sufficiency to overcome the historical problems of educational KPU. Expenditures in support of the new Federal policy have not increased, but decreased sharply. Congressional, public, and professional con-

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[10] Francis S. Chase, "Educational Research and Development in the Sixties: The Mixed Report Card" in Committee on Education and Labor, House of Representatives, Educational Research: Prospects and Priorities (Washington, D.C.: U.S. Government Printing Office, 1972), pp. 29-30.

[11] Building Capacity for Renewal and Reform, op. cit., p. 1.

fidence in the efficacy of educational KPU has become lower, not higher. The new programs and policies initiated by the Institute in its brief history have been few. A field initiated studies program was mounted which has increased modestly funds available on a competitive basis to the individual researches. The labs and centers were moved from an institutional to a program purchase system of support allegedly to make them more responsive to Federal level educational priorities and to test them in the competitive educational market place. The use of Requests for Proposals (RFP's) and Requests for Qualifications (RFQ's) has increased markedly to stimulate the field's responsiveness to the Federal level definition of national needs in education and to insure better coordinated output from the system. A local problem solving program in LEAs has been initiated on an experimental basis to test the proposition that the ineffectiveness of the KPU system is not the systems concept, but the assumption of linearity underlying the system. Considerable emphasis has been placed upon the definition and specification of problem areas in which N.I.E. will (would have?) invest its funds.

A Capsular Review

Table 1 represents, in terms of general directions, the paths that have been traversed by educational KPU at the Federal level over the past twenty years. Initially it seemed sufficient to allow new knowledge to accumulate in education as it was apparently doing in the other social sciences. Application, diffusion, and adoption, in this view of the KPU world, will take care of itself. When it seemed that it was not taking care of itself, programs were introduced to centralize and focus problem definition (the substantive view) and to flesh out obviously missing links in KPU, e.g., reasonable

emphasis on development activity and storage and retrieval capacity (RDDA continuum view). When this still fell short of expectations a systems view was set forth that defined roles for components in the system, linked them together in an operating sense, and attempted to insure productive output at the adoption end of the RDDA continuum. The inexorable trends of the period have been:

1. To add programs which cover necessary function areas in educational KPU, and
2. To press toward program coordination, linkage, and control.

TABLE 1

Depiction of Primary Conceptual Perspectives Influencing Federal KPU Policy in Education, 1956-1974

Time Period	Perspective of KPU	Program Examples
1956-1962	Development of new knowledge through individual creativity of scholars-Social Science View	Cooperative Research Program; Title VII of N.D.E.A.
1962-1965	(a) Problem delineation by centralized agency-Substantive View	Projects English and Social Studies; R and D Centers in Vocational and Special Education
	(b) Development of systematic elements in KPU-RDDA View	ERIC; R and D Centers
1965-to date	Establishment of a coordinated system-role definition, linkages, centralized control-Systems View	Regional Educational Laboratories; Title III Centers; Experimental Schools; RFPs, RFQs.

A Comment on Conceptual Structures

Throughout this section emphasis has been placed on the fact that implicitly or explicitly, planners of Federal programs in educational KPU have been and are operating with some view of the world of knowledge production and utilization in education. This view is in effect a logical reconstruction of what these planners purport to be the way that the world of KPU works, in the same way that scientific theories are reconstructions of the relationships among the phenomena that they attempt to explain. Logical reconstructions are in general not only desirable, but necessary: it is impossible for the human mind to cope with the empirical world without models or frameworks to guide it.

Of course, no one expects that a reconstructed logic will represent in unerring detail the logic-in-use, the intuitive or "natural" mode, of any process.[12] The reconstruction is, after all, merely a representation or model, a still picture of what is usually a dynamic entity, perhaps an idealized version of a less-than-ideal (or rational) logic-in-use.

Still, no one would wish to apply a reconstructed logic that was seriously or overtly deviant from the logic-in-use which it purported to describe, except perhaps to caricature a position or to reduce some proposition to its ultimate absurd level. If a reconstructed logic is to be used as a guide to Federal level planning and policy for educational KPU, it ought to be as free from such discrepancies as it is humanly possible to make it: anything less

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[12] The authors have borrowed the terms "reconstructed logic" and "logic-in-use" from Abraham Kaplan. He presents a thorough discussion of these concepts in The Conduct of Inquiry (Scranton, Pa., Chandler Publishing Co., 1964), pp. 3-12.

would be a misuse, if not an abuse, of the whole idea of modeling.

As the terms "conceptual structure" or "perspective of KPU" are used in this paper, they denote the reconstructed logic that planners have employed in developing educational KPU policy. The concern is with whether or not this reconstructed logic has reasonable fidelity with the logic-in-use of the KPU field, or whether serious discrepancies exist between the ideal and real logics. These discrepancies will be assessed in terms of three criteria:

1. Completeness, i.e., the extent to which the conceptual structure is sufficient to account for the full spectrum of necessary KPU functions (RDDA). It seems reasonable to argue, for example, that the social science view simply ignores certain necessary elements such as development and diffusion.

2. Balance, i.e., the extent to which the conceptual structure is responsive to both individual and institutional goals of agencies involved in educational KPU. Again, to use the social science view as an example, it seems almost exclusively responsive to the individual (idiographic) aspirations of KPU agents while ignoring almost entirely the organizational (nomothetic) requirements of KPU agencies.

3. Realism, i.e., the extent to which the conceptual structure reflects with accuracy and fidelity the "real world" of educational KPU. It would seem, for example, unreasonable to utilize the systems model as the reconstructed logic (conceptual structure) if the requisites for a system were both not present and logically unattainable.

These criteria will be employed in subsequent sections of the paper to examine the predominant current conceptual structure (the systems concept) as well as to test an alternative structure to be projected.

THE SYSTEMS VIEW OF EDUCATIONAL KPU: A CRITIQUE

The emergence of the systems concept as the predominant view of educational KPU had two implications for Federal planning of KPU programs. First, it focused attention on the range of KPU functions to be performed - their necessity and sufficiency, since a system requires necessary parts and a sufficient whole as a matter of definition. Second, it highlighted linkage mechanisms among the agencies carrying out the functions to insure system output.

Identifying a Necessary and Sufficient Set of KPU Functions

During much of the 1950's an argument persisted in the literature of education as to whether it was the responsibility of the practitioner to read the research literature and then make whatever applications it implied; or whether it was the responsibility of the researcher to make the implications of his work sufficiently clear so that the practitioner could apply them to the operational problems with which he was confronted daily. Practitioners tended to characterize researchers as wool-gatherers who were too willful to attend to their responsibilities (for who is better able to see the consequences of research than the researcher?); while researchers tended to regard practitioners as too poorly trained to avail themselves of the improved knowledge that surrounded them on all sides (for who is better able to devise applications than the practitioner who is steeped in reality?).

Gradually, however, calmer voices prevailed. Calls began to be heard for the establishment of "middle-men" positions, translators who would put into common terms what the world of research knew. Frequent references were made to the Agricultural Extension Service as an analog. Others were calling for

an expansion of the "D" portion of educational R and D with researchers and practitioners functioning jointly in the search for solutions to operating problems in schools. The accusatory rift between the practitioner and the researcher was not closed completely (indeed, it has not been even today) but the recognition began to dawn on many educators that there were missing links that might have more to do with the divorcement of research and practice than either the attitude or competence of the researchers on the one hand or the practitioners on the other.

A variety of papers began to appear in the literature discussing and defining the necessary and sufficient functions of KPU, including on by the currnet authors which presented "A Classification Schema of Processes Related to and Necessary for Change in Education".[13] While there were numerous ways of describing these functions, the classification system that gained the greatest popularity used four major categories: (1) research, aimed at the expansion and extension of the knowledge base; (2) development, focused on the invention and engineering of solutions to operating problems; (3) diffusion, directed toward the spread of engineered solutions to practitioner agencies that needed them; and (4) adoption, calculated to assist adopting agencies in adapting, utilizing, and institutionalizing such solutions. Eventually this scheme was designated as the RDDA model of educational change.[14]

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[13]David L. Clark and Egon G. Guba, "An Examination of Potential Change Roles in Education", Essay Six in Rational Planning in Curriculum and Instruction, ed. Ole Sand (Washington, D.C., NEA-CSI, 1967), p. 116.

[14]The reader might note the not too subtle transposition of terms that occured in this paragraph. What began as a classificatory or definitional scheme was transposed into a "model" of educational change. The term model even in common sense rather than scientific terms obviously represents something in the real world. As will be seen shortly, this transposition influenced the assumption of linearity which is vital to the systems view.

Creating a System: Linearity and Function Linkage

The coalescence of thinking on these four broad function areas, and the designation of the classification system as a model, had a consequence of enormous importance, in that planners soon began to think of the functions as linear. How could a practitioner agency adopt a problem solution that it did not know about? And how could a solution be diffused if it had never been developed? And how could it be developed if the knowledge on which it were based was not grounded in prior research studies? Despite an occasional demur that things were not all that neat in the real world, or that it was clear that the functions were in interactive (fed on one another) the basic proposition of linearity was swallowed whole.

It was a small step, then, to the next logical inference, i.e., if the functions were necessary and linear they could be linked, thereby forming:

-- A system of agencies and agents,

-- With assigned functions and responsibilities in RDDA,

-- Sharing goals,

-- And directed to productive output which would result in improvement oriented change in schools.

The tendency in this direction, at first implicit, became more and more formalized until, in 1972, Congress established the National Institute of Education, charging N.I.E. "to build an effective educational research and development system" as one of its four major objectives.[15]

N.I.E. inherited the systems concept of educational KPU - the agency did not invent it. N.I.E.'s first publication in an attempt to deal with the

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[15] Building Capacity for Renewal and Reform, op. cit., p. 1.

concept of a "system" indicated dissatisfaction with the linear model especially in acceptance of the notion that there is "...a tendency to assume a one-to-one correspondence between institutions and functions."[16] And a useful effort was undertaken to describe what was labeled, "An Interactive Model of Educational Change."[17] Despite the challenge to the concept of linearity, however, the systems concept still permeated the recommendations of the report as is illustrated by the major categories of recommendations:

-- Developing a monitoring system
-- Strengthening the external R and D system
-- Building a linkage and support system
-- Building problem solving capacity in the operating system[18]

Assessing the Systems View

It will be recalled from the previous section that the criteria suggested for assessing logical structures for educational KPU were completeness, balance, and realism. How does the systems view measure up to each?

Completeness. The systems model allowed a direct and adequate response to one of the major criticisms of the social science view, i.e., that it was incomplete. Early Federal programs were concentrated almost exclusively on research, and almost entirely on one institutional site for research, the college and university. The functions of development, diffusion, and adoption were largely ignored under, for example, the Cooperative Research Program.

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[16] Ibid., p. 53.

[17] Ibid., pp. 51-60.

[18] Ibid., p. 63.

When these functions were seen as necessary process elements in a system, it obviously became important that direct attention be paid to them in Federal planning.

Balance. The systems perspective also responded to the criticism of imbalance found in the social science view. The Cooperative Research Program concentrated almost wholly on individual productivity, the perfect exemplar of the idiographic approach. The basic concept seemed to be that if it was research that was wanted, the best way to accomplish that goal was to commission individual researchers to carry out those studies which they felt were important and significant. Creativity, it was argued, cannot be commanded, nor can the course of research most likely to have future payoff be pre-determined. Each researcher must be allowed to make that contribution which he felt he should and could make. But this formulation ignored the nomothetic aspect of KPU activity. It was quickly noted, for example, that the support of isolated researchers tended to reinforce isolated scholarly activity; that the results of CRP projects were not cumulative; and that the research undertaken was unresponsive to the needs of education at the operational level.

The effort to establish a system introduced the nomothetic elements so sorely lacking, and it was predicted that once a system of linked agencies charged with carrying out the necessary and sufficient KPU functions was established, cumulative, relevant, efficient, and responsive research (and development, diffusion, and adoption) would surely result.

Nomothetic behavior is social or institutional behavior; whether or not to behave nomothetically becomes an issue for people only when they are part of some institutional entity. The development of a national system was therefore a powerful force in the direction of establishing nomothetic expectations,

and of setting sanctions for failure to reorient behavior more nomothetically. Indeed, the stronger and more formalized the system, the stronger would be the nomothetic expectations and the more powerful the sanctions (i.e., reinforcements or deprivations) that could be invoked in their support.

Balance, however, is not satisfied simply by introducing a formerly missing element, but rather by achieving a state of harmoniousness or equilibrium among elements. The systems view seems to have overbalanced the scales toward concern for the nomothetic aspects of the educational KPU scene.

Support for individual researchers almost disappeared between 1965 and 1972. The small contract program of the Office of Education which was widely used by less experienced researchers as a means for initiating careers in educational inquiry was eliminated. Even the revival of the Field Initiated Studies program by N.I.E. resulted in only seventy-three studies being approved for support in 1974, and the total funds devoted to this research was smaller than the CRP budget of a dozen years earlier.

As the bulk of the supported programs have become "non-field initiated" they have become more and more initiated by the Federal government itself. Thus the Federal policy makers and program directors have assumed the decision-making function about what programs and studies should be stimulated and supported. And while these policy makers are typically advised by a variety of bodies representing the professional KPU community as well as lay communities, they tend to reserve almost all final decision-making power to themselves. To put it in terms of the nomothetic-idiographic dimensions, the Federal policy makers set the expectations ("write the book") while the field carries out the expectations.

This shift in responsibility for determining program priorities

has manifested itself in the marked increase in the use of the Request for Proposal device, and more recently, in the Request for Qualifications device. The RFQ is used to determine who is eligible to respond to RFPs! In the Labs and Centers, the counterpart of this movement can be seen in the program purchase concept, which is simply a way of supporting only those programs which the Federal program directors have determined are most germane and functional. Not only can individual researchers no longer easily obtain support for their individual ideas, but it has become almost equally difficult for the Labs and Centers to obtain support for the programs which they believe to be important.

Finally, the shift is exemplified in the government's diminished interest in the support of training programs. So long as RDDA functions are thought to be best carried out by individuals following their own creative instincts, it is of importance to identify those individuals who can play such roles and to provide them the best training possible. But when it is assumed that the creative aspects are already in hand, i.e., that there exists some centralized group that has already carried out all of the demanding, conceptual tasks leaving only technical operations to be performed, the emphasis on training is bound to wane.

While some moves toward centralization were perhaps originally justified on the grounds that nomothetic elements needed to be introduced in order to offset the equally undesirable overemphasis on the idiographic approach, the cure may have become worse than the disease. The emphasis now is almost completely in the nomothetic direction. And as organizational theory well illustrates, one over-emphasis is as bad as the other. For while an idiographic emphasis may produce KPU activities that are idiosyncratic, non-aggregative, and inefficient, a nomothetic emphasis tends to produce KPU activities that

are narrow, unimaginative, and constrained. Perhaps more importantly, the nomothetic emphasis is likely to leave as a residue a group of performers--the KPU community - that are dissatisfied, have low morale, and come to depend increasingly on informal channels and means of accomplishing their objectives. In the case of actors in the KPU community the option obviously includes withdrawal by the individual from the inquiry sector to training activity in which he may well find greater satisfaction.

Realism. On the criterion of realism, the systems view does not fare well. The issue at stake is whether or not the idea of a system for educational KPU makes sense in terms of what is "out there" to systematize. The root metaphor for system is after all mechanical--it implies some sort of mechanism with a variety of parts moving together to achieve some common end. Is that metaphor isomorphic with the reality of the educational KPU community? Is the "reconstructed logic" of the system compatible with the "logic-in-use" of the field?

The answer to this question appears to be "No." It is certainly not the case that there is some common objective, goal, or, to borrow a term from systems theory, output, to which the many agencies involved with educational KPU are committed. Can one really believe that local school systems, state departments of education, universities, regional educational laboratories, research and development centers, and private R&D agencies, to name only the most obvious educational agencies, are or could be committed to the same KPU output? Can one really believe that these agencies can be linked in the systems sense that what are outputs for one agency become the inputs for another? Can one really believe that there exist a set of cooperative modes which these agencies can and will adopt that will make linkage possible? Can one really believe that the sanctions (reinforcements and deprivations) which these agencies respond

to can all uniformly be enlisted in support of a national KPU system? Can one really believe that the needed resources are sufficiently flexible within these agencies, and sufficiently transferrable among them, so that they can be well utilized in support of the common objective? Surely not.

Brickell and Wong in a recent report of an NIE-sponsored conference[19] provided an illustration of the incompatibility between the systems perspective and the reality of the field. Originally, they asserted, the systems view prescribed more or less differentiated functions for R&D Centers, regional laboratories, and commercial publishers. The R&D Centers were the only agency to engage in research, according to this original formulation, but they also devoted some effort to development and evaluation. The Regional Educational Laboratories (RELs) engaged in development and evaluation, but added the important demonstration function as a major area of endeavor. Publishers, it was assumed, would simply receive the researched, developed, evaluated, and demonstrated products and engage in their distribution.

In practice, however, these functional areas have become overlapping. R & D Centers have found it necessary to extend their functions to include not only demonstration but distribution; RELs have moved well beyond distribution and have begun implementation activities: publishers have moved into development, evaluation, demonstration, and implementation, in addition to their ascribed function of distribution.

In the near future, Brickell and Wong predicted, all three agencies will perform all functions in one way or another, so that their functional spectrums

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[19]Henry M. Brickell and Susan Wong, Conference Report: Dissemination of NIE Sponsored Products (Henry Chauncey Conference Center, Princeton, New Jersey, September 6-7, 1973).

will be virtually indistinguishable. The field will move from a series of separate, well-differentiated, functionally non-equivalent agencies that cooperate toward the achievement of some common goal, into a group of competing agencies that will be hard to differentiate in terms of what it is that they do.

A second example of the inadequacy of the systems view, or any other single extant competing view, on the criterion of realism is offered by Sieber in reporting on his experience with the Pilot State Dissemination Program which was designed to deliver knowledge-based information sources to teachers and administrators in schools. In reflecting upon his experience in evaluating dissemination efforts under the Program, Sieber noted:

> "In short, it does not fit any single existing model; and indeed, its emphasis on adaptation to user-defined needs and user-choice of options introduced some very new elements. And yet, despite its messy theoretical foundations, it seems to have worked. I confess that no one was more surprised than I; and I am still trying to understand why." [20]

Commentary

Rooted in what appeared to be strong rational-logical underpinnings, the systems view of educational KPU has been employed extensively in Federal planning for KPU programs for a decade. Its apparently unassailable rational base, however, does not stand the light of empirical or experiential examination. That is not the way the world is.

The key question becomes whether or not it makes any difference in planning. Surely, it does and it has. Just as the limitations of the social science

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[20] Sam D. Sieber, "Trends in Diffusion Research: Knowledge Utilization," Alice R. Jwaideh and M.S. Bhola eds. Research in Diffusion of Educational Innovations: A Report With an Agenda, Viewpoints, School of Education, Indiana University, Vol. 50, No. 3 (1974): p. 69.

view were holding back development in the field, so the inaccuracies of the systems view have provoked breakdowns, hostilities, and failures in educational KPU. It would be foolish to contend that the mercurial history of Federal level KPU programs over the past decade is all attributable to any single cause. Rapid disillusionment with programs is not restricted to educational KPU but the systems approach has contributed to the situation by holding out unrealistic performance expectations as a modus operandi. Newly constituted agencies, e.g., REL's: new substantive thrusts, e.g., career education; and new loci for activity, e.g., Title III of ESEA, all suffered from productive system expectations which were not under the control of the agency being assessed.

The conceptual structure supporting Federal policy in educational KPU has itself contributed directly to the expectation shortfall of KPU programs and agencies across the country by holding out unreasonable expectations for sequential productivity and linkage among the involved producing agencies. The evaluative questions being posed by the Federal planners are based on assumptions that act as if a world existed which simply does not exist. The evaluations, subsequently, are negative: The predictable next step is the invention of yet another substitute program which is intended to re-structure the world as it "should be" which, in turn, simply introduces further conflict and failure.

The alternative is to stop fighting the world and begin building on and with it. Precedent to this is gaining a better understanding of what exists "out there" and providing a conceptual base that is complete, balanced, and realistic.

THE CONFIGURATIONAL VIEW OF EDUCATIONAL KPU: A PROPOSITION

Analyses made in earlier sections of this paper have indicated that the currently prevailing reconstructed logic or conceptual view of educational KPU is the systems model, and this this model has had less than optimal utility for guiding Federal level planning in KPU. The purpose of this section is to define and depict what is purported to be a more useful formulation, the configurational view; to test that formulation against the criteria of realism, balance, and completeness; and to contrast the configurational view with the systems view which it is recommended to replace.

The Configurational View: Definition

The configurational view may be defined as a COMMUNITY-LIKE MODEL[21] OR REPRESENTATION (i.e., A RECONSTRUCTED LOGIC) OF THE DOMAIN OF EDUCATIONAL KPU.

The term "community-like" is intended to identify the root metaphor undergirding the model in the same sense that "machine-like" is the root metaphor for the systems view. The basic contention is that the KPU planner would be much closer to descriptive reality if he were to picture an

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[21] The term "model" is not used here in a restricted technical sense, e.g., a metaphor or analog from some other, more developed field, as usually defined in scholarly treatises on the philosophy of inquiry. Rather it is used in a more common sense mode, as applied for example, to the Linkage Models of educational change, the Nomothetic-Idiographic Model of behavior of individuals and institutions, the Discrepancy Evaluation Model, etc. The parenthetical phrase "reconstructed logic" is probably technically more descriptive and apt.

educational KPU community rather than a KPU system. He would, for example, suggest to himself that since few hierarchical relationships with authority allocations exist among the agencies and agents of educational KPU, he might be better served by concepts and terminology borrowed from community analysis, e.g., "political" and "negotiation" than by "allocation" and "authority." Or that terms like "compulsion," "delegation," or "assignment," congruent with a systems model, are more likely to be portrayed accurately by the term "persuasion;" or "responsibility" by "commitment."

But the authors are setting forth a configurational view and not a community perspective because educational KPU is, in fact, not a community. The term "metaphor" is used in its literal sense, i.e., the application of a phrase to a concept it does not literally denote. Slavish adherence to the idea of community as a model would lead to conclusions which would surely fail on the criterion of reality. The use of "community" as a root metaphor rather than a model should, in contrast, be suggestive and illuminating. The first point to be made, then, is that:

> The configurational view is roughly analogous to the concept of a community. The variety of institutions and individuals concerned with and functioning in educational KPU are more likely to consider themselves to be related to one another in a community-sense than in an organizational-sense.

The term "configurational" was chosen to describe the view adjectivally because it (1) connotes a conformation of elements that exist in a definable territory; (2) assumes that the elements are (a) specifiable, and (b) relevant to one another; and (3) implies that the interaction of the parts is more than the sum of the parts, as, for example, configurationism in Gestalt psychology. The term also implies that there is no direct analog available

which can simply be chosen and used as a model for this particular configuration of organizations as they relate to one another in terms of knowledge production and utilization. To the reader, from an operational point of view, the term configurational should mean that:

> The educational KPU domain or territory can be defined as the full range of operating educational agencies or institutions in the country. They can be inventoried or specified both individually and in various groupings. Their relationships to one another are generated usually by their attention to a function other than KPU, i.e., training. They are however related in varying ways to KPU functions and do, or at least could, maintain a productive interaction to attain a comprehensive, shared social goal, i.e., improvement oriented change in education.

It is one thing to define the concept "configurational" in gross terms, and quite another to generate from the term a view that has heuristic value for planning. To bridge this gap, three additional definitional elements will be introduced - (1) questions that can be raised about the configuration; (2) analytic tools that can be brought to bear on the questions; and (3) criteria that must be accounted for in subsequent tests of the configurational view.

A wide ranging set of questions are suggested by the view (this is, in itself, a heuristic test of the perspective) but for initial generative purposes three are posed:

1. What are the goals and functions of educational KPU within the configuration?
2. What organizations and individuals populate the configuration?
3. How do the organizations and individuals work in or relate to educational KPU?

To deal with these questions certain analytic tools, some old and some new to educational KPU, will be employed. For example:

1. Previously developed classification schema for KPU functions will be applied to question #1.

When the task seems uncomplicated conceptually as, for example, in inventorying institutions, the task will be chiefly application of taxonomic techniques:

2. Using standard inventories of institutions and agencies, a taxonomic regrouping will be undertaken to clarify the institutional geography of the domain suggested in question #2.

As the questions break new ground, new perspectives will be brought to bear reflecting the juxtaposition of the institutions in the domain in a community-like configuration. So, for example,

3. In question #3, relationships will be explored employing such tools of organizational analysis as the nomothetic-idiographic model to view behavior of individuals and institutions; and classical organization theory to reanalyze these independent organizations.

Undergirding the entire analytic scheme, of course, will be the general metaphor "community" which connotes a configuration of quasi-independent institutions and individuals living together for selected common or overlapping goals and functions.

A final note relevant to the ways in which the configurational model was generated may be in order. The authors have actively employed the criteria of completeness, balance, and realism in generating the particulars of the configurational view. Criteria are useful not only as post facto tests, but if they are in hand apriori can actually assist in shaping the logical structure which will ultimately be devised and tested. So, for example, the nomothetic-idiographic tool was actually suggested by the criterion of balance. Considerations relating to the three criteria were actively employed in this theoretical development task.

The Configurational View: Depiction

The three broad questions that were posed about the configurational perspective may be used as a guide to establish a general "feel" for this

view of the educational KPU community.

1. What are the goals and functions of educational KPU within the configuration?

One aspect of this question, i.e., the functions descriptive of educational KPU, seems to have been dealt with satisfactorily in the literature of the field to date. However grouped, and with no assumptions of linear flow, KPU needs to attend to the functions of:

1). Generating new knowledge

2). Inventing, engineering and testing solutions to operating problems in schools

3). Disseminating knowledge and solutions throughout the community

4). Adapting, adopting, and institutionalizing solutions to operating problems in educational units.

The configurational view does not require agreement on the specification of those four functions as stated above. It does require acceptance of the notion that there are a multiplicity of functions to be performed, each of which contributes uniquely to KPU, and that a successful Federal policy for the community will not assume a narrow function perspective.

In broad terms, the configurational view accepts the goal for educational KPU that has, as noted earlier, been propounded in one form or another in Federal policy for a century, i.e., the goal of educational KPU is improvement oriented change in educational operations. However, since this overall goal has appeared to be acceptable in the context of any perspective of educational KPU it is obviously too general in form to be operationally useful. Perhaps the question, in the final analysis, is less a "goals" question in relation to KPU than a goals question in relation to the institutions populating the domain. With very few exceptions, i.e.,

REL's, R and D Centers, private research organizations, and a handful of graduate centers for the study of education, these institutions are not primarily KPU production organizations. This is not to say, obviously, that they are not concerned about, or are not active participants in KPU, but rather that their line function is operating the American school system and their dominant activity is educating students or supervising that education. For such institutions, KPU is a handmaiden function - a route to improvement - or, to refer to the earlier citation from Gideonse, a form of social action.

The essential goal-level rethinking required by the configurational view is reflected in this phenomenon of goal orientation of the institutions in the educational KPU domain. Sensible, effective national policy will assume that educational KPU is a form of social action for the members of the educational community; will recognize that most members of the community will accord educational KPU only second-level priority, and then most likely for idiosyncratic purposes; and will view these idiosyncratic goals for KPU as opportunities to be seized upon in policy formation rather than as obstacles to be overcome in the achievement of homogenized national goals for educational KPU.

2. What organizations and individuals populate the configuration?

As noted, the configurational view assumes that the educational KPU community encompasses the full range of diverse institutions and individuals involved in the social process field of education. Since for discussion purposes and for policy planning it is hopeless to think of the institutions without some grouping or classification, a six-level classification schema is proposed in Table 2. The contention is that this schema should be employed differentially in describing the occupants of the KPU domain for

TABLE 2

Classification Schema for Institutions and Individuals in the Educational KPU Community

Categories	Common Examples	Characterization
Generic Classes of Agencies	- Local education agencies - Institutions of higher education - State education agencies - Regional educational laboratories - Private research organizations	Defined by a common, primary operational goal(s) which may or may not be KPU oriented, e.g., operating schools, monitoring educational agencies, effecting change in schools, developing instructional materials.
Clusters of Homogeneous Agencies	- Council of Chief State School Officers - American Association of Colleges for Teacher Education - Great Cities School Improvement Program	A subset of the generic class (sometimes the entire class) distinguished by a special concern, characteristic, or purpose, e.g., political influence, shared expertise and knowledge, size, type of operational problem confronted by the agency.
Clusters of Heterogeneous Agencies	- Council for Educational Development and Research - Teacher centers - School study councils	A cluster drawn from several generic classes and formed to pursue some common purpose or interest, e.g., political influence, operating efficiency or effectiveness, shared expertise.
Individual Agencies	- New York State Dept. of Education - Chicago Public Schools - Center for Vocational Education - Georgia Southern College	Particular operating agencies with some assigned line responsibility in the American educational system. The overwhelming bulk of such agencies are responsible primarily for the task of educating children and youth.
Individuals Within Agencies	- University professor - Public school teacher - SEA staff member - Evaluator in an REL	Particular actors, who may or may not be primarily committed to KPU activity (generally not), who are assigned individual roles in any of the individual agencies.
Clusters of Individuals Within or Across Agencies	- National Education Association - American Educational Research Association - American Association of School Administrators	Clusters of actors who join together in member-associations locally, i.e., parallel to individual agencies, or on a state, regional, or national basis to pursue common interests, e.g., political, substantive or disciplinary, welfare.

particular purposes, i.e., it may from time to time be appropriate to think of local educational agencies as a generic class but the differences within the class may be as great or greater for KPU planning than across classes.

As was noted in the description of KPU functions in the preceding section, the configurational view does not mandate agreement on the particular schematic presentation in Table 2. It does, however, suggest a number of things about this total population:

-- The total number of involved agencies and individuals is very large.

-- They group themselves together for purposes and functions which are not primarily related to KPU.

-- Agencies and individuals are represented simultaneously across levels so that no generic classification is adequate to reflect their interests, activities, or goals. However convenient it may be to think about local education agencies (LEA's), for example, in Federal level KPU planning, the fact is that the individuals and agencies that comprise this generic group represent sub-parts of every other group. And local education associations, as a further example, are likely to view themselves as critical to the implementation of any policy or program affecting LEA's - and they will be right.

At this stage in the paper, the concern is chiefly to note that an institutional geography similar to, or more precise than, that represented in Table 2, is a requisite to Federal policy formulation if (1) educational KPU programs are to become a part of the mainstream of American education and (2) they are expected to lead to improvement oriented change in operating systems. Finally, it should be re-emphasized that however inconvenient it may seem to educational KPU planners, the institutional geography of this configuration is determined chiefly on bases tangential or unrelated to educational KPU.

3. How do the organizations and individuals work in or relate to educational KPU?

As was suggested earlier, two approaches have seemed to be especially helpful in dealing with this question. First, in terms of simple organizational analysis, what characterizes the relationship of the agencies in the configuration? Second, in terms of individual ↔ institutional analysis, what implications can be drawn in relation to both individuals working in a KPU setting and also single agencies within the melange of agencies?

First, to turn to an organizational characterization of the territory:[22]

-- The agencies do not share a common conception of necessary or desirable KPU outputs. Since singly and collectively they tend to hold a variety of idiosyncratic goals (which usually do not include primary emphasis on KPU goals), there is no single KPU output model which all can share and have commitment to, and which all will make efforts to achieve.

-- The overwhelming majority of the agencies and individuals tend to view KPU activity as subordinate to their primary line activity. Even in universities where research is often considered to be a prestige activity, teaching is the primary activity. Universities can and do exist without doing research, but none exists without teaching.

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[22] The authors will not argue at this stage in the development of the configurational view that the organizational characterizations offered are sufficient. The hope is that each is valid and that the set will suggest additional analyses to the reader. In further development of the perspective one might, for example, employ for analytic purposes one or several perspectives from organizational theory and play them off systematically against what is already known about the demography and organization of the educational KPU domain. Current interest is primarily in demonstrating the heuristic value of both the overall perspective and the tools available to flesh out the perspective.

-- The agencies are essentially independent of one another. Each agency, if it wishes to cooperate with one or more other agencies in a KPU activity, must rely on persuasion to interest the companion agency. No agency can unilaterally set up a cooperative enterprise, but any agency can refuse to participate in one. Consortia tend to be uncommon, and channels of communication are largely informal, where they exist at all.

-- The agencies tend to play overlapping roles in educational KPU. The fact of organizational independence has the consequence that many of the organizations play overlapping roles even though they may be generically dissimilar institutions. So universities, RELs, R & D Centers, and even LEAs and SEAs may engage in research; universities, RELs and R & D Centers may compete in development; RELs, R & D Centers, SEAs and LEAs may all engage in dissemination, etc.

-- The agencies tend to have no binding authority relationships. There are no sanctions that can be applied; there is no subordinate-super-ordinate hierarchy: the institutions are essentially equal.

-- There is no function flow across organizational boundaries, occasioned by the factors of organizational independence, lack of authority relationships, and role overlaps. Each organization selects the range of KPU functions which it wishes to fulfill and carries them out as resources permit. KPU is in effect a cottage industry.

-- The basic relational posture is one of competition. Resources available from the Federal government are sought by each agency since each is endeavoring to operate independently over a wide spectrum of similar activities. Cooperation is rarely seen except in the form of temporary alliances which are often political accommodations.

-- Activity relationships are minimal among the involved KPU agencies.

When they do occur, as for example, in one of the alliances mentioned a moment ago, they are likely to be symbiotic in the biological sense, i.e., the living together of dissimilar organisms in a mutually beneficial way. If the activities happen to coincide in achieving some common goal (which may be merely political in nature), it is a serendipity.

If this characterization is accurate, the KPU community is described in the configurational view as highly decentralized, consisting of a number of more or less independent and co-equal members, who may from time to time find it helpful to form temporary alliances but who, in the main, retain their independence, shun authority and activity relationships, and engage in as many different kinds of KPU activities as seem to be needed and feasible for them to maintain their self-sufficiency.

Before turning to the second organizational perspective, it may be worthwhile to pause for a moment to reflect on the implications of this characterization for Federal planning. The basic argument of the configurational view is that what has preceded represents "the way it is" for the participants in educational KPU and that these characterizations ought to be viewed as givens which modify Federal policy rather than the reverse. If this seems to be an unnecessarily non-interventionist view of the world, the reason underlying it is that this structure is serving primarily non-KPU goals and functions and it will <u>not</u> restructure itself or be restructured for the convenience or systematization of a handmaiden goal or set of activities. This point is being overdrawn for illustrative purposes, i.e., obviously there are structural changes that can be achieved through Federal policies for educational KPU that will be useful and still consistent with the overall demography and organizational structure of the territory, but

the planner should assume that these will be, at best, incremental and evolutionary, leaving the basic structure much as it is currently.

A second perspective that can be employed usefully in examining the relationships, both institutional and individual, that exist within the educational KPU community is the nomothetic-idiographic model proposed first by Getzels and Guba.[23] This model noted that individual (actor) behavior in an organization is a function of two sets of forces: the need-dispositions of the particular actor who may happen to fill a role in the organization and the role-expectations which the organization sets for the role which he fills. The former dimension is a function of individual personality, and is termed the idiographic dimension; while the latter dimension is a function of organizational goals and processes and is termed the nomothetic dimension. Organizations exist for some purpose, and organizational roles are defined in ways that interlock in order to achieve that purpose most effectively. An organization that insists on rigid adherence to institutional role expectations may be said to operate nomothetically, while one which allows its actors wide latitude in interpreting their roles may be said to operate idiographically. Getzels and Guba recommended a middle path, termed by them "transactionalism," which is described as organizationally effective and individually fulfilling.

The amount of self-actualization or self-fulfillment possible to an individual actor is a function of the extent to which the institution in which he works is idiographically oriented. Conversely, the extent to which

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[23] J. W. Getzels and E.G. Guba, "Social Behavior and The Administrative Process," School Review 65(Winter, 1957): 423-41.

organizational goals are fully and effectively met is a function of the extent to which the organization is nomothetically oriented. In the real world, compromises are necessary on both sides. On the one hand, an organization that does not make some nomothetic demands is likely to founder seriously in achieving its objectives. On the other hand, an organization, especially one that depends largely on the creative behavior of individuals as KPU organizations are likely to, must also give its personnel some freedom to direct themselves, lest they become dissatisfied, uncreative, and inefficient.

Historically the educational KPU community was substantially idiographic in its orientation (the social science view undergirding the CRP); but the move to a systems view introduced such a strong nomothetic orientation that the small field initiated studies program of NIE is almost the lone remaining bastion of idiographic organizational design.

This strong nomothetic orientation has consequences at three levels. First, thinking in terms of the individual professional in a KPU agency, he has little freedom to move in ways which he thinks are important. The program he works on is probably supported under a program purchase option, or awarded via the RFP route; its major characteristics are those which Federal program directors believe to have high priority. His greatest burst of creativity comes at the time when he writes the proposal in response to the RFP; here he has a constricted opportunity to influence the nature of his work for the remainder of the contract period.

Second, but equally important, the nomothetic orientation has an analogous impact on organizations as well as individuals. Within the overall systems framework, a single REL, or university, or LEA, or private research agency is struggling to maintain its identity and assert its goals against

the nomothetic demands of the system. If there is no room within the system for an REL to establish and work on goals of its own as an institution, or if organizational roles are defined so tightly as to eliminate organizations from some function areas altogether, the consequence for the organization qua organization will be similar to that noted earlier for the individual within an organization, i.e., it will become dissatisfied, uncreative, and inefficient - the system will have smothered one of its means of production.

Finally the configurational view, in nomothetic-idiographic terms, searches for the transactional state of organizational balance described by Getzels and Guba. Recognizing the need to pay attention to goals of educational KPU productivity which transcend the aspirations and goals of individuals and individual organizations and agencies, it also suggests that the achievement of these individual goals, at least in part, is a sine qua non to the attainment of broader goals.

Testing the Configurational View

Throughout this paper three criteria have been espoused as appropriate for judging the utility of an educational KPU conceptual framework or reconstructed logic: completeness, balance, and realism. In Section II, these criteria were applied intensively to an analysis of the systems view, and more briefly, to the social science view of educational KPU. It is time now to inquire how well the configurational view measures up on these same criteria.

Completeness. This criterion has been defined as the degree to which

a conceptual framework takes account of the full range of educational KPU functions. This criterion was not well met by the social science view (indeed, failure on this criterion was perhaps the major reason for abandoning that particular reconstructed logic), and the systems view was adopted, among other reasons, because it responded to this criterion so well.

The configurational view, developed in full cognizance of the failure of the social science view and the subsequent success of the systems view on completeness, was intended from the beginning to embrace the full range of KPU functions. The configurational view thus meets the criterion almost as a matter of definition, i.e., concern for completeness was built into the view at the level of an undergirding assumption.

Balance. This criterion has been defined as the extent to which the conceptual structure is responsive to both individual and institutional goals of agencies involved in educational KPU. As noted in the previous section this is actually a three level concern for responsiveness: (1) the individual in the organization; (2) the organization as a discrete entity in the KPU community, and (3) the goals of the educational KPU community as a whole. The social science view failed obviously on this criterion because of its almost sole emphasis on the individual. The systems view reacted (overreacted) to this criticism by imposing nomothetic demands which not only cut most individuals off from KPU support but even blocked the organizational-actualization of the goals of individual KPU agencies.

The configurational view is an obvious reaction to both these former positions. It takes the posture that neither an extreme nomothetic or idiographic view is appropriate, but that what is needed is a middle-course

or transactional view.[24] By definition, then, this view expresses direct concern for the criterion of balance and, as was noted at the conclusion of the previous section, recognizes the need to build KPU policy and programs which have comprehensive goals stated and implemented in such a way that individual and individual organization goals can be achieved simultaneously. This position would not argue, of course, that there must be a single overall educational KPU structure that is responsive to both nomothetic and idiographic factors; it would argue, however, that there must be elements present in the Federal plan responsive to each, and that the Federal plan must be sufficiently flexible to allow some "play" back and forth between nomothetic and idiographic factors as circumstances (e.g., the politics of financing) permit or demand. It would surely be just as disastrous to insist on an "inflexible," total transactional position as to require inflexible nomothetic or idiographic postures.

Realism. This criterion has been defined as the extent to which a conceptual view reflects with fidelity the "real world" elements and conditions of educational KPU. The social science view failed on this criterion because it effectively ignored all functions except research and all insti-

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[24] The term transactional should not be interpreted literally as a middle course. No implication of unswerving "hewing of the line" is intended. The transactional KPU policy maker will at some times take a fairly firm nomothetic line and at others a very relaxed idiographic line, depending on circumstances. Transactional administration calls for a sensitive administrator who can sense which posture is more appropriate at any given time and can respond accordingly. It also calls for an administrator who can tolerate ambiguities and take risks. There are few risks and no ambiguities involved in always administering "by the book" or in always letting the "team have its way".

tutional settings except universities, i.e., it did not describe the geography of the territory. The systems view was rejected because it made unrealistic assumptions about the nature of the educational KPU agencies involved and about the kind and degree of functional relationships existing among them.

Someone other than the current authors would actually have to make the judgment that the configurational view failed in this criterion area since it was obviously the intent to generate a realistic view of the world of educational KPU by means of the configurational approach. As a matter of fact, a critical foundation for the view is its willingness to accept the domain on its own terms (and work from that vantage point to generate policy and program) rather than to construct an idealized model which makes assumptions about how things ought to be.

It is of course possible that the stress on realism has within it the essential weakness or inadequacy of the configurational view. The point has been made repeatedly that the emergence of the systems view can be accounted for on the grounds that it represented a useful reaction to the earlier social science model; the difficulty with the systems view, it has been asserted, is that it represented an over-reaction and the cure became worse than the disease. Similarly, it is possible that the appeal of the configurational view rests on its apparent utility as a reaction to the faults of the systems view; it may also turn out to be an over-reaction.

The most likely direction of such an over-reaction seems to fall along the realism dimension. If the systems model is too much and makes too many demands or assumptions about what the world of educa-

tional KPU should be like, the configurational view may tend too far in the other direction. But of course no one can deal with reality entirely on its own terms; reality is too intransigent and complex for that. Attempting to deal with reality in its infinite detail must finally be self-defeating.

On the other hand, the insistence of the configurational view that educational KPU planning must begin with the world of educational KPU as it is should not be understood to mean that planning must forever take that world on those present terms. As was noted earlier, some incremental changes are undoubtedly feasible and desirable so long as the planner does not assume that a domain organized primarily for non-KPU goals will be restructured to KPU ends. But the brightest hope for change within the configurational view is indirect (although not necessarily serendipitous or unanticipated) change. If the individual and institutional members of the domain are provided with an opportunity to participate in KPU functions on terms consistent with (or at least not in direct conflict with) their own goals and needs, the relationship of KPU to the performance of their competing line functions may well change over time, and the centrality of KPU to educational operations may, in turn, open up new KPU policy and program possibilities - and ultimately new configurations.

Contrasting the Configurational and Systems Views

Since this paper has hammered away at the proposition that policy in educational KPU should derive from a configurational rather than a systems view it is almost necessary to make as explicit and specific as possible

the distinction between the views on those factors especially relevant to KPU planning. Since these factors have already been touched upon in preceding portions of this paper, what remains to be done is to bring them into a single, contrastive analysis. In the interest of avoiding redundancy, this contrastive analysis will be made in summary form with a few illustrations inserted to bolster the argument.

The key factors to be considered are arrayed in Table 3. The table lists the factors and, in a word or two, characterizes the position likely to be taken on each factor by employing the competing views.

Let us, then, comment briefly on the ten factors:

1. Structure - perceived as centralized in the systems view (SV) but decentralized in the configurational view (CV). An SV which insists that single system outputs are the evaluative base for success or failure must assume the centralized placement and control of planning, design, and program administration functions (even, for example, to the level of RFPs and RFQs). CV could not only tolerate but would suggest (1) participatory planning, (2) decentralized design, and (3) flexible administration. Since the outputs would be differential, and the evaluation would be based upon multiple program outputs, assumptions of centralization would be deemphasized.

2. Functions - perceived as linked and sequential within SV; independent and disconnected within CV. Conversion to a program purchase policy for labs and centers is an obvious SV example. Since the output of one agency is linked as the input of another the former needs to be specified to the first agency by the planner so that the latter is available for use by the second agency. The CV obviously does not argue against or discourage linkages or connections but simply recognizes that the maintenance

TABLE 3

KEY FACTORS DISTINGUISHING THE CONFIGURATIONAL VIEW FROM THE SYSTEMS VIEW

FACTORS	SYSTEMS VIEW	CONFIGURATIONAL VIEW
1. Structure	Centralized	Decentralized
2. Functions	Linked, sequential	Independent, disconnected
3. Roles	Discrete	Overlapping
4. Agency status	Hierarchical	Co-equal
5. Goal orientation	Known, shared	Emergent, idiosyncratic
6. KPU orientation	Primary	Peripheral
7. Authority-Responsibility	Delegated	Negotiated
8. Motivation	Extrinsic	Intrinsic
9. Institutional behavior	Nomothetic	Transactional
10. Interaction	Synergistic, permanent	Symbiotic, temporary

of formal function linkages on a permanent basis flies in the face of the actual agency organization and can be maintained only artificially, i.e., with the stimulation of external funds and for the duration of these funds. The CV would suggest strengthening the function areas on an intra-institutional basis, e.g., through forms of institutional support, to establish the conditions under which functional linkages are likely to emerge and sustain themselves for at least the duration of joint problemsolving ventures.

3. Roles - perceived as discrete in SV; overlapping in CV. This characteristic of SV was illustrated earlier in the paper by the examples cited from Brickell and Wong, and Sieber. Obviously the original definition of REL-R and D center functions and the assumptions underlying practitioner use of ERIC assumed discrete roles which were denied by the actors and agencies. CV would suggest the design of national level programs that would allow agencies and individuals to obtain support for KPU functions they are able and willing to carry out and to develop KPU capacity that would enhance the breadth of their KPU roles.

4. Agency Status - perceived as hierarchical in SV; co-equal in CV. No matter how they are sugar-coated, value and structural assumptions distasteful to participating KPU agencies have been made by the SV. The LEAs are mere adopting agencies in a systems view. There is no way for a "target system" to hold the same position on a value scale of creativity as "the creator." The heavy-handed monitoring of the central system (NCERD and NIE) which has included even basic goal alteration by the central agency makes clear that the structural hierarchy exists at least in the minds and acts of central planners. But as CV has pointed out, the hierarchical assumption is, in fact, a KPU invention. Except in the case of agencies explicitly

created by the Federal government for educational KPU, or those agencies which must temporarily relate to the government because they happen to have a funded project, the members of the KPU community co-exist in that community on their own terms. National policy must recognize this fact and provide support for co-equals that may eventually become partners if their worth is not threatened. The only Federal agency posture that will sustain itself over time is one that is collegial rather than contractual.

5. Goal Orientation - perceived as known and shared by SV; emergent and idiosyncratic by CV. This, of course, if an essential distinction. Unless the goal is known and shared the SV makes no sense at all - whoever designed a system for ambiguous output? But the evidence that the goals of KPU are emergent in a scientific sense (we truly do not know what we do not know) and even in a social action sense (why else does each new director, secretary, and commissioner insist on the necessity of discretionary funds to wrestle with contemporary national needs?) is overwhelming. Equally as compelling in the CV are the diversity of agency goals for KPU. Anyone familiar with the KPU goals of an LEA, on the one hand, and the goals of a graduate center of study in education on the other, knows that the Federal KPU policy must assume and build upon both goal diversity and goal redefinition if the community member agencies are to be encouraged to develop and participate in KPU programs. The NEA cannot and will not, for example, support KPU policy which assumes that LEA goals for KPU do not involve the local education association as well as the formal LEA.

6. KPU Orientation - perceived as primary in SV; peripheral in CV. Hard as it is for the KPU planner to face the fact, the line function of most community members is "keeping school." As Sieber pointed out in the

earlier cited example, a KPU information system that assumes the practitioner is ready and waiting for access to the system will fail. If, conversely, one recognized, as in CV, that the practitioner's major energies will be devoted to his primary operational problems, the results of the Multi-state Program are less difficult to interpret. Federal policy for KPU under a CV would recognize the primary orientation of the agency and attempt to fit KPU to the orientation rather than twisting the orientation to fit the requirements of KPU output.

7. Authority-Responsibility - perceived as delegated in SV; negotiated by CV. The structural assumptions of SV noted earlier in this section necessitate a pattern of authority-responsibility delegation inconsistent with the facts of the KPU community. This leads to such absurdities, for example, as evaluating RELs on the basis of effecting change in schools through the use of their products while contracting with them to produce products. The underlying assumption that they can either force or control product use by the "target system" is the logical extension of a non-existent structure. The concept of negotiation to create the conditions required for KPU functions that bridge agency groupings is not only consistent with the real world of KPU but consonant with the emerging pattern of inter-agency development in the country.

8. Motivation - perceived as extrinsic by SV; intrinsic by CV. What, in the end analysis, will establish commitment by KPU community members? SV has assumed that motivation can be created extrinsically regardless of the primary mission of the agency; an assumption belied by the oft-cited experience of experimental programs collapsing as soon as external funds are withdrawn. Conversely, CV would insist on the integrity of the

KPU program and the local agency functions and goals. For so long as members of the KPU community are forced to abandon local needs to fit into KPU programs, KPU will remain peripheral to education in this country.

9. Institutional Behavior - perceived by SV as nomothetic; by CV as transactional. An SV must assume arrogation of the priority setting function to a central agency for the establishment of content areas for study and development, through the design of studies and projects in the areas, even to the methodological approaches to the studies. And that is where SV has led the KPU community over the past ten years with the initiation of closely monitored RFPs, program purchase policies, RFQs, etc. CV does not assume there are no priorities beyond those of individuals and individual institutions but would, for example, applaud the re-initiation of the field-initiated studies program and would attempt to invent similar field-initiated structures responsive to the aspirations of individual agencies as well as individuals. Inter-agency, goal-oriented efforts would be negotiated with the KPU community broadly represented.

10. Interaction - perceived by SV as synergistic and permanent; by CV as symbiotic and temporary. SV needs to argue that the overall impact of the design is to restructure the relationships among agencies so that a productive flow of products through a variety of processes to higher productive output will be achieved. But quite obviously, as CV would suggest, the creative and productive linkages and partnerships that have emerged in educational KPU have been temporary systems, e.g., the permanent linkage design for Labs and Centers never made it off the ground but the conjoining of the Individually Prescribed Instruction program of the R and D Center at the University of Pittsburgh and the dissemination program of Research for

Better Schools, Inc. was useful for both agencies and for the consortia of participating schools. CV would assume a National policy fostering the development of temporary systems.

It is possible to distinguish the configurational and systems views in another way suggested by Table 3 but not made explicit in it, and that is the posture to be taken in view of the reality with which KPU planners are faced. Undoubtedly, even the most avid of the systems advocates and planners are aware that the ideal represented in the SV model of the KPU world has not been realized and is not congruent with the extant world of educational KPU. They too would be forced to agree that KPU agencies are not linked organizationally and functionally; that for many of them, KPU is not a central function; that in many cases these agencies are competitors and not cooperators; and so on. The point being made here has to do with the posture that would likely be taken by either a systems proponent or a configurationist given such a level of awareness of the real world.

The systems proponent would regard such non-systems characteristics as obstacles to be overcome, barriers to be struck down, conditions to be ameliorated. The configurationist, conversely, is more likely to see them as channels through which KPU activity must be guided; constraints by which the creative bursts of KPU must be disciplined; keys which must be utilized to unlock KPU potential. In short, the systems proponent view such characteristics as intractable; the configurationist sees them as malleable.

THE CONFIGURATIONAL VIEW OF EDUCATIONAL KPU: SOME ILLUSTRATIONS

This section will offer some examples of operating problems in educational KPU that have been generated to a substantial extent by the systems view. Illustrative responses to the problems will be derived from the configurational view. The intent of the section is to stimulate discussion among participants in this CEDaR conference of the utility (or lack thereof) of the configurational view.

The section is built around Table 4. This table lists eight KPU agencies in generic groupings; provides an illustrative example of one KPU problem confronted by the agency group or a substantial number of component agencies in the group; and offers a response from the configurational perspective. The narrative simply expands on the example. It is hoped that the audience will construct yet other problem and response statements for agency types, or sub-groupings within types, down to the level of individuals in KPU, and enter them in the blank Table 5 which is attached at the end of this paper.

Turning then to the illustrative agencies, problems, and responses:

Regional Educational Laboratories

Each of the RELs has endeavored to develop not only those program components that fit well into the pattern of goals established by Federal policy, but also other program elements directed more particularly to idiosyncratic goals of interest to the REL. The former programs are fundable under the program purchase option, but the latter must be independently funded by whatever means the REL can manage. It is of course extremely difficult for an

TABLE 4

ILLUSTRATIONS OF CURRENT PROBLEMS AND CV-ORIENTED RESPONSES FOR SELECTED GENERIC GROUPS OF KPU AGENCIES

AGENCY TYPE	ILLUSTRATIVE PROBLEM	ILLUSTRATIVE RESPONSE
Regional Educational Laboratories	RELs find it impossible to maintain program balance and intra-agency goal development when Federal funds are directed to the agency under a program purchase plan designed to support nationally defined KPU goals while programs of institutional interest must be financed solely from other sources.	(1) Re-establish an adequate pattern of institutional support. (2) Create a field initiated studies program intended for institutional rather than individual applications, emphasizing: (a) High risk ventures (b) Programs to establish lines of inquiry or development for the agency (c) Staff planning and development grants.
Research and Development Centers	R and D Centers find it impossible to carry out mission-oriented, sustained, programmatic research in a substantive field when Federal support and evaluation is basically project-oriented.	
Schools, Colleges, and Departments of Education	Schools, colleges, and departments of education were just beginning to vitalize their KPU programs in the early to mid-60's when their efforts to become significant production centers were crippled severely by sharp cutbacks in field initiated study funds and the small contract and training grant programs.	Enlarge the scope of the FIS program; reinstitute the small grants and training grants programs; take account in Federal planning of the basically idiographic orientation of faculty and programs in institutions of higher education.

(CONTINUED)

TABLE 4 (continued)

AGENCY TYPE	ILLUSTRATIVE PROBLEM	ILLUSTRATIVE RESPONSE
State Education Agencies	SEAs have historically defined diffusion as one of their major functions, but National KPU policy has almost ignored the SEA in mounting diffusion responses as, e.g., creating what was originally conceived as a de novo diffusion network (the RELs).	Assume that self-defined major KPU functions are core building blocks for Federal planning and program development; in this case support and foster the type of diffusion program sponsored jointly this year by NCCSSO and CEDaR.
Local Education Agencies	LEAs are always provided lip service as key elements in educational KPU but are typically viewed as mere receiving agencies in the KPU process.	Extend N.I.E.'s recently initiated program for local capacity building and revive a national, regional, or state level Title III-type program where the emphasis is on support of a locally-based KPU unit rather than a project, experiment, or demonstration.
Private KPU Agencies	While well suited to respond to Federal RFPs/RFQs, private research agencies remain relatively unfulfilled (institutionally and individually) by the "piece-work" bid system and frustrated by the close monitoring imposed by Federal agencies on contracts that are awarded.	Institute projects and programs of inquiry which reflect the professional status and stake of these agencies in KPU; develop a collegial framework of relationships between these agencies and the Federal government that reflects their value as a national resource in the KPU community in education.

(continued)

TABLE 4 (concluded)

AGENCY TYPE	ILLUSTRATIVE PROBLEM	ILLUSTRATIVE RESPONSE
Professional Associations	The natural inclination and appropriate role of such agencies as national level advocates for educational KPU is weakened or destroyed altogether by the current systems-generated complex of Federal policies and programs in KPU many of which are either (1) inimical to the stated interests of association members, or (2) so tangential to their interests as to be deemed irrelevant, or (3) both.	Obviously no Federal KPU policy can or should bridge all the idiosyncratic interests of the members of relevant professional associations. However, an "Educational Conference Board" type alliance might well be formed to negotiate a policy and program platform for national support of educational KPU.
Federal KPU Agencies	These agencies are caught in a "cycle of failure" set in motion by: (1) the press from OMB and Congress to reinforce and extend the systems view and to demand performance that is unrealistic; (2) hostility of the field in response to reasonable bureaucratic efforts to meet these unrealistic expectations; and (3) consequent lack of a constituency to represent and support the Federal KPU agencies in their efforts to obtain funds for KPU programs.	Attack the cycle of failure by (1) abandoning the overly-simplistic view of the world of educational KPU represented by the systems perspective; (2) working with the "Conference Board" in projecting a realistic long range developmental program for educational KPU.

REL to devise what it would consider to be a balanced program under these funding conditions. The problem is almost a classic case of imbalanced institutional behavior, in which the nomothetic program elements accorded high priority by the government receive substantial support but the institutionally-fulfilling program elements receive scant support. The persistence of this situation, over time, will provoke other consequences in institutional planning and goal setting. First, REL staff and leadership will lose interest and motivation to plan for institutionally-derived goals. Second, and probably more importantly, as resources are employed near full capacity to generate proposals and complete project activities on a program purchase basis there is no slack time in the institution to devote to planning, goal setting, or new ventures.

There are a number of responses that could easily be imagined to this dilemma. A return to general institutional support is obviously one response. Thinking beyond this conventional suggestion, one might propose a field initiated studies program under which the respondent is anticipated to be an institution rather than an individual. Such a program could foster local institutional planning and development by emphasizing support for (1) high risk ventures; and/or for (2) programs that seem to lead to the establishment of a line of inquiry by the institution which (a) builds on demonstrated competencies in inquiry (i.e., logical extensions of past achievements) or (b) breaks new ground for the particular institution which may allow them to expand their productive capabilities.

Research and Development Centers

R and D Centers were established originally by U.S.O.E. to support

sustained and coordinated inquiry in a priority substantive area. This mechanism for research support was implemented as a Federal educational KPU program in response to the criticisms that the then existing KPU programs did not result in cumulative or aggregatable research nor in research focused on high priority areas of national concern. This emphasis on long range support (even including Federally-financed buildings) for a critical mass of researchers plumbing an area in depth has lost much of its initial thrust as support and evaluation have moved more and more to a project-oriented basis. The concept of programmatic development has been subverted by the insertion of a program purchase rather than an institutional support base.

An appropriate response to the problem can be predicted from the previous sub-section. The most straight-forward move would be reinstitution of the earlier policy of core institutional support. This would in no way interfere with the notion that such agencies should also be responsive to emerging national KPU priorities, since a supplemental program of project support in high priority need areas would direct the attention of the R and D centers to these targets. These agencies might also benefit substantially from participation in the institutional field initiated studies program cited earlier. And both R and D centers and labs would be aided in developing staff continuity and capabilities through a program of staff planning and development grants which could be employed on short term bases for staff re-training, planning, and synthesis activities.

Schools, Colleges, and Departments of Education

Graduate schools and colleges of education have long been regarded as active practitioners in the KPU community. Contrary to generally accepted

views, however, there have never been a large number of these agencies engaged systematically in knowledge production.[25] Under the stimulation of the Cooperative Research Program an interest in and commitment to KPU activity were building and the number of schools of education that could be identified as emerging KPU centers was definitely increasing. This movement received a paralyzing blow from the sharp diminution in field initiated studies support, the demise of the small contract and grant program, and the disruptive entry and withdrawal of support for graduate research training programs. The effects of these moves were felt especially in the university setting because of the essentially idiographic organizational structure of these institutions to which these programs responded particularly well.

N.I.E.'s effort to reinstitute the field initiated studies program was a distinct step in the right direction in taking advantage of the KPU resource in schools of education. Similar attention to small grants type support and training funds is needed. But even more basic is Federal recognition of the unique character of these institutions. They do have an internal structure which emphasizes the idiographic role of the professor. If schools of education are to be considered a productive resource in KPU, this characteristic needs to be taken into account. It is predictable, for example, that as institutions they will not be able to respond competitively in a system emphasizing RFPs and RFQs, yet many of the areas to be studied could well employ

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[25] In the early 1960's as few as fifteen graduate schools of education could be identified as consistent producers of research and researchers. See David L. Clark and John E. Hopkins, A Report on Educational Research, Development and Diffusion Manpower, 1964-1974, (Bloomington, Indiana, Indiana University Research Foundation, 1969), pp. 107-114.

the expertise of the personnel in these institutions. An understanding and appreciation of intra-institutional demography is imperative to realistic Federal planning.

State Education Agencies

The literature of the past twenty-five years both descriptive of and emanating from SEAs has emphasized the role of such agencies in the dissemination and diffusion of innovations. The expansion of Federal educational KPU policy to include diffusion among the activities it would support must have seemed like a long-sought breakthrough to SEAs. At last, KPU planners were recognizing a critical role in KPU in which the SEA would be involved centrally. But the Federal diffusion intentions were directed elsewhere. A national diffusion network of RELs was invented and implemented, a national ERIC system was established, school-based demonstration centers were supported under the Experimental Schools Program, but the SEAs were essentially bypassed (euphemistically, consulted).

The transfer of Title III funds to the SEAs was a step in the right direction offering, at least, some improvement-oriented KPU funds to these agencies. The diffusion program supported jointly this year by CEDaR and NCCSSO would foster the sort of role that SEAs could and should play in educational KPU. Again, the basic point is probably captured better in the generalization than the illustration. SEAs have emphasized the necessity of their diffusion role in their own institutional definition of responsibilities. The configurational view would suggest that Federal KPU policy should tap explicitly the self-expectations of performance held by KPU agencies. There is no *a priori* reason to suppose that SEAs cannot perform diffusion functions ade-

quately. If it is in their self-interest to do so, it will undoubtedly turn out to be in the self-interest of the community as a whole to foster and encourage them to do so.

Local Education Agencies

Despite pious statements about the centrality of LEAs in KPU, they have been viewed chiefly as reluctant adopters at the end of the RDDA continuum. Such a role definition will never be acceptable to LEAs, and so long as the LEA defines knowledge production and utilization as something that occurs "out there" the process of KPU will remain peripheral to the social process the LEA is intended to effect, viz., keeping school.

N.I.E.'s recent move to fund capacity building for problem solving at the local level may be an effective step in redressing the current imbalance. Title III might have been a much more effective program if it had been conceptualized as a mechanism for building up local KPU units rather than funding ad hoc projects. A new Title III-like program with this explicit intent might be initiated. Again, the general orientation toward program development for KPU in LEAs may be more significant than specific examples. The expectations for national policy need to fit the character of schools--their primary function will of necessity be "keeping school;" they are interested in innovation change, and experimentation but within the framework of the operational problems confronting them daily; they may respond to short term interventions supported by external funds but they will not institutionalize programs that do not respond to their own felt needs.

Private KPU Agencies

Private research agencies are in a strong competitive position to respond

efficiently and effectively to the RFP/RFQ mode that has grown in popularity in the Federal KPU agencies over the past several years. As a matter of fact, this ability to respond has caused significant growth in the number of educationally-oriented private KPU agencies.

Yet in several respects the almost exclusive reliance on this pattern of interaction with governmental agencies provokes serious problems for the private research group: (1) the mode creates a "piece-work" bid mentality which is not satisfying to the researcher or developer in the agency; (2) the piece-work pattern tends to exclude the agency and the researcher from any sense of of closure in having invented and followed through on an inquiry, i.e., the RFPs frequently specify only a phase of the inquiry over a short time period; (3) the intensity of Federal agency monitoring of RFPs to keep the system efficient and effective provides room for even less self-actualization on the part of the inquirer; and (4) literally no provision is made for the private agency to generate its own programs and interests.

Some of the same response tactics noted for centers and labs would be appropriate for the private agencies, if the assumption is made that such agencies represent a strong educational KPU resource. The concept of an institutionally-oriented field initiated studies program would obviously be applicable (A.I.R.'s invention of and participation in Project Talent might be considered a prototype even though it was begun and supported under an individually-oriented program - CRP). An attitudinal change is also required. The Federal KPU agency needs to generate a collegial rather than a strictly contractual relationship with the private agency that recognizes and reflects their institutional value as a KPU resource. Excessively detailed RFPS, intensive project monitoring, short duration contracts, and relative exclusion of private agency

personnel from KPU planning are, in the final analysis, self-defeating features of the governmental posture toward these agencies.

Professional Associations

Such associations have been concerned by a number of dimensions of Federal KPU policy in recent years. They have often felt that they were excluded from taking on KPU projects, for which they were very well suited, simply as a consequence of being identified as members of the establishment. Some of the agencies have felt they were simply defined out of KPU when the activities being supported were of vital interest to them, e.g., the tendency to assume that local education associations are not a part of the definition of a local education agency or are adequately represented by the administration and board of the LEA.

But there is an overarching concern that seems to have priority in terms of these agencies. Professional associations represent a variety of constituencies, both individuals and institutions. In almost all cases such associations have an interest in and commitment to the advocacy of educational KPU. Yet they have found themselves on the horns of a dilemma, for existing KPU policies and programs have often either affected their membership adversely, been so tangential to the interests of their members as to be considered irrelevant, or both. A formidable potential constituency for educational KPU is lost altogether or found to speak with so many voices as to have no effective thrust. One of the natural and accepted functions of the professional association is frustrated.

From a configurational view this end result is predictable because the essential step of negotiation among members of the KPU community has never

transpired. It is imperative that some mechanism be established to create the conditions under which a negotiated platform of national program and policy for educational KPU can be generated to which the multiple associations can subscribe and from which they can speak. Perhaps a model for such a mechanism can be found in the New York State Educational Conference Board which had noteworthy success in that state for many years in melding the diverse interests of a wide variety of associations into a common legislative program. Such a group, however devised, is a sine qua non for educational KPU development in this country.

Federal KPU Agencies

The very Federal agencies that plan for and implement policy and programs in KPU are, of course, themselves members of the educational KPU community. And it would be only fair to point out that they are experiencing frustrations equal to those felt by other community members. They are drastically underfunded. On the one hand they are trying to respond to pressures from Congress and O.M.B. for "quick-kill" results for sophisticated management practices directed toward criteria of prudence and efficiency, and for evidences of impact on schools, all of which are inconsistent with the configuration of the educational KPU community. They are simultaneously under pressure from that KPU community for more reasonable and realistic institutional behavior. Complicating the entire picture is the use made of the Federal KPU agency by the political figure and/or administration appointee who expresses distaste, disinterest or both in all that has gone on before while he or she seeks to imprint the agency's program with a "new" direction.

The end result has been, at least in recent years, what seems to be a

reinforcing cycle of frustration and failure. To meet the immediate criticism more is promised than can be delivered, setting up what will surely be a negative evaluation in another year or two. Development and progress in educational KPU is too slow and too uncoordinated to ever satisfy many of the governmental gate keepers who affect decisions on funds, policies, and programs. But to pretend that it is otherwise is simply a transitory method for avoiding the problem.

A first step in breaking the cycle has been proposed in this paper. Like it or not a realistic conceptual view of educational KPU will have to be presented to those who decide upon policy in educational KPU. Unless the extant structure of the field is taken into account, and the complexity of KPU as both a social action and scientific enterprise is recognized, there will be no significant progress in the development of a long range effective policy for educational KPU. If the character of the field is employed as a building block, there is at least a possibility that the constituency noted in the previous sub-section (the Educational Conference Board) can move to break the cycle of frustration and failure.

One final note; among the many acts of presumptuousness taken in this paper, none is more obvious than the final section. The authors live in only one of the agency settings for which examples were drawn. We know there are more cogent problems than those we cited and more inventive responses than we proposed. Please turn to Table 5 and help build up this inventory to the point where it may be more useful to all.

Please fill in whatever portions of the table that come easy to you. Return to David Clark or Egon Guba before the end of the meeting.

Name: (if you wish)_____

Type of Agency_____

TABLE 5

ADDITIONAL ILLUSTRATIONS

Agency Type	Illustrative Problem	Illustrative Solution

Please fill in whatever portions of the table that come easy to you. Return to David Clark or Egon Guba before the end of the meeting.

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